



# Effective Health Care

## Lower Urinary Tract Symptoms

### Secondary to Benign Prostatic Hyperplasia

#### Nomination Summary Document

## Results of Topic Selection Process & Next Steps

- The topic, *Lower Urinary Tract Symptoms Secondary to Benign Prostatic Hyperplasia*, will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

## Topic Description

**Nominator(s):** Organization

**Nomination Summary:** The nominator is interested in the comparative effectiveness of currently available and emerging treatments for lower urinary tract symptoms secondary to benign prostatic hyperplasia (LUTS/BPH). More specifically, the nominator is interested in the effectiveness of pharmacological treatments including alpha-blockers, beta-3 agonists, anticholinergic agents, 5-alpha-reductase inhibitor (5ARI), phosphodiesterase type 5 inhibitor (PDE5) inhibitors, and their combinations in the treatment of LUTS/BPH. Additionally, the nominator is interested in the adverse effects of pharmacotherapy treatment options, and patient characteristics or test results that can be used to determine optimal pharmacotherapy treatment options. The nominator is also interested in the comparative effectiveness of diagnostic techniques and strategies for LUTS/BPH for patients with a predominant complaint of nocturia.

### **Staff-Generated PICO (1 of 2)**

**Population(s):** Adult males, aged 45 or older, showing lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH)

**Intervention(s):** Pharmacological treatments for LUTS/BPH, including alpha-blockers, beta-3 agonists, anticholinergic agents, 5-alpha-reductase inhibitor (5ARI), phosphodiesterase type 5 inhibitor (PDE5), and their combinations

**Comparator(s):** No treatment, placebo, lifestyle changes, other pharmacological treatments, and all other treatment options

**Outcome(s):** Changes in disease severity scores / pressure-flow-volume measurements for adult males with LUTS/BPH; adverse effects of pharmacotherapy treatment options; a better understanding of the patient characteristics or test results

that can be used to determine the optimal pharmacotherapy treatment options for patients with LUTS/BPH

**Staff-Generated PICO (2 of 2)**

**Population(s):** Adult males, aged 45 or older with nocturia

**Intervention(s):** Diagnostic techniques and strategies for LUTS patients with a predominant complaint of nocturia, including frequency-volume charts and/or voiding bladder diaries, as well as tests to exclude other causes of nocturia (e.g., diabetes, heart failure)

**Comparator(s):** All other diagnostic techniques and strategies

**Outcome(s):** Accurate diagnosis

**Key Questions from Nominator:**

The original questions submitted by the nominator examined a broad range of areas of interest pertaining to the topic. Further refinement of the topic focused the questions on the comparative effectiveness of pharmacotherapy treatment options for LUTS/BPH and diagnostic techniques and strategies for LUTS/BPH in patients with a predominant complaint of nocturia. The revised key questions for this topic are:

1. What is the comparative effectiveness of pharmacotherapy treatment options for lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH), including alpha-blockers, beta-3 agonists, anticholinergic agents, 5-alpha-reductase inhibitor (5ARI), phosphodiesterase type 5 inhibitor (PDE5), and their combinations?
  - a. What are the adverse effects of pharmacotherapy treatment options for LUTS secondary to BPH, including alpha-blockers, beta-3 agonists, anticholinergic agents, 5ARI (e.g., prostate cancer stemming from 5ARI), PDE5 inhibitors and their combinations?
  - b. What are the patient characteristics or test results that can be used to determine the optimal pharmacotherapy treatment options for LUTS secondary to BPH?
2. What are the necessary tests to determine if a patient with a predominant complaint of nocturia has a metabolic, nocturnal polyuria, polydipsia or other non-prostaocentric etiology as the cause of his LUTS? Should these tests be required or recommended to determine if BPH is the cause of LUTS before treatment is initiated?

## Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Benign prostatic hyperplasia (BPH), also known as benign prostatic hypertrophy, is nonmalignant enlargement of the prostate gland and is a common occurrence in older men. Lower urinary tract symptoms (LUTS) is a term that has been used to refer to symptoms that include frequency, urgency, and nocturia (individual has to wake one or more times per night in order to void) relating to storage and/or voiding disturbances. BPH is often a primary underlying cause of LUTS.

- LUTS secondary to BPH (LUTS/BPH) affects a significant portion of aging males within the US. Although LUTS/BPH is usually not a life-threatening condition, it is associated with symptoms that affect quality of life and functioning, by interfering with daily activities and normal sleep patterns.
- Common medications for LUTS/BPH include alpha-blockers, beta-3 agonists, anticholinergic agents, 5-alpha-reductase inhibitor (5ARI), phosphodiesterase type 5 inhibitor (PDE5), and their combinations.
- Common diagnostic strategies for LUTS patients with a predominant complaint of nocturia include frequency-volume charts and/or voiding bladder diaries, as well as tests to exclude other causes of nocturia, such as diabetes and heart failure.
- There are several recent and relevant publications on treatment options for LUTS/BPH and evaluation of nocturia that can help to inform clinical practice and thus warrants an AHRQ systematic review.